

REMARKS

Claims 1-2, 4, 7-8, 11-12, 14-15, 21, 25-26, 29-31, 40-42, 45, and 52-55 are pending at the time of the Final Office Action. Claims 3, 5-6, 9-10, 13, 16-20, 22-24, 27-28, 32-39, 43, 46-51, and 56-60 were withdrawn from consideration. In the Final Office Action mailed on October 5, 2006, the Examiner took the following action: (1) rejected claims 40-42, 45, 52-55 under 35 U.S.C. §112, second paragraph, as being indefinite; (2) rejected claims 40, 41, 45, and 52-53 under 35 U.S.C. §103(a) as being unpatentable over Dearman (U.S. 4,726,575) in view of Haumann (U.S. 2,968,054); (3) rejected claims 1-2, 4, 12, 21, 25-26, 29-31, 42, and 54 under 35 U.S.C. §103(a) as being unpatentable over Dearman in view of Haumann, and in further view of Snyder (U.S. 2,324,803); and (4) rejected claims 7-8, 11, 14-15, and 55 under 35 U.S.C. §103(a) as being unpatentable over Dearman in view of Haumann, and in further view of Snyder and Smith (U.S. 5,280,892). Claims 1, 21, 40 and 52 are amended. Applicants respectfully request entry of the above-proposed amendments, as well as reconsideration of the application in view of the foregoing amendments and the following remarks.

I. Claim Rejections under 35 U.S.C. §112, Second Paragraph

Claims 40-42, 45, 52-55, are rejected under 35 U.S.C. §112, second paragraph, as being indefinite. Applicants have amended claim 40 to recite “a plurality of force applying units” instead of “one or more force applying units.” Likewise, applicants have also amended claim 52 to recite “a plurality of force applying means” instead of “one or more force applying means”. Accordingly,

applicants respectfully request reconsideration and withdrawal of the objections to claims 40-42, 45, 52-55.

II. Rejections under 35 U.S.C. §103(a)

Claims 40-41 and 45

Claims 40-41 and 45 are rejected under 35 U.S.C. §103(a) as being unpatentable over Dearman in view of Haumann. Claims 41 and 45 depend from claim 40. Claim 40, as amended, recites:

40. A clamping system for manufacturing, the clamping system comprising:

- a first anchor and a second anchor;
- a plurality of force applying units, each force applying unit including a body and a force applying member movably attached to the body arranged to apply a clamping force to a work piece, wherein the force applying members are configured to be laterally simultaneously motivated by an externally-powered force unit that drives the force applying member relative to the body;
- a plurality of coupling units operatively coupled to the force applying units, each coupling unit including a movable pivot, attached to and interspersed with the one or more force applying units forming a chain of force applying units and coupling units;
- a first end support coupled to a first end coupling unit and the first anchor; and
- a second end support coupled to a second end coupling unit and the second anchor.

Applicants respectfully traverse these rejections. First, Dearman does not teach, as recited in claim 40, “a *first end support* coupled to a first end coupling unit *and the first anchor*; and a *second end support* coupled to a second end

coupling unit *and the second anchor.*” (emphasis added). In contrast, as noted by the Examiner, both ends of the chain 8 are connected to a single anchor 7. (Figure 1). Second, applicants respectfully submit that the deficiencies of Dearman are not remedied by Haumann. Haumann teaches pressure cylinder chambers 12, 13, and 14 and conduits 7 and 8 that are adapted to be supplied with pressure medium from a suitable pressure source. (4:5-9).

Accordingly, the cited references to Dearman and Haumann, whether individually or in combination, do not teach, disclose or fairly suggest the system recited in claim 40. Furthermore, since claims 41 and 45 depend from claim 40, they are at least allowable for the same reason that makes claim 40 allowable over the cited references.

Claims 52-53

Claims 52-53 are rejected under 35 U.S.C. §103(a) as being unpatentable over Dearman in view of Haumann. Claim 53 depends from claim 52. Claim 52, as amended, recites:

52. A clamping system for clamping a work piece during manufacturing, the system comprising:
- a first anchor means and a second anchor means;
 - a plurality of force applying means, each force applying means arranged to apply a clamping force to the work piece, wherein the force applying means are configured to be laterally simultaneously motivated by an externally-powered;
 - a plurality of pivoting means arranged in a chain with the plurality of force applying means, the pivoting means arranged to pivot to conform the chain to a surface of the work piece; and
 - a first end support means coupled to a first pivotal means and the first anchor means; and

a second end support means coupled to a second pivotal means and the second anchor means.

Applicants respectfully traverse these rejections. To this end, applicants respectfully incorporate the argument present above in response to the rejection of claim 40 under 35 U.S.C. §103(a) by analogy. Accordingly, applicants assert that Dearman and Haumann do not disclose, teach, or fairly suggest, whether individually or in combination, “a *first end support means* coupled to a first pivotal means *and the first anchor means*; and a *second end support means* coupled to a second pivotal means *and the second anchor means*,” as recited in claim 52. (emphasis added). Furthermore, since claim 53 depends from claim 52, it is at least allowable for the same reason that makes claim 52 allowable over the cited references.

Claims 1-2, 4, and 12

Claims 1-2, 4, and 12 are rejected under 35 U.S.C. §103(a) as being unpatentable over Dearman in view of Haumann, and further in view of Snyder.

Claims 2, 4, and 12 depend from claim 1. Claim 1, as amended, recites:

1. A clamping system for securing a first surface of a work piece against a frame, the clamping system comprising:
 - a first anchor and a second anchor;
 - a plurality of end supports, wherein a first end support is coupled to the first anchor, and a second end support is coupled to a second anchor;
 - one or more force applying units, each of the force applying units including a body and a plunger movably coupled to the body and adapted to apply a clamping force to a second surface of the work piece to secure the first surface of the work piece against the frame;
 - and

one or more coupling units linked with the one or more force applying units forming a chain of interspersing force applying units and coupling units between the plurality of end supports to support the force applying units against a second surface of the work piece opposite the first surface, each coupling unit including a lockable pivot, the lockable pivot adapted to pivot to conform the chain to a surface of the work piece when unlocked, and adapted to be locked when at least one of the force applying units applies the clamping force to the work piece.

Applicants respectfully traverse these rejections. First, applicants respectfully incorporate the argument present above in response to the rejection of claim 40 under 35 U.S.C. §103(a) by analogy. Accordingly, applicants assert that Dearman and Haumann do not disclose, teach, or fairly suggest, whether individually or in combination, “a plurality of end supports, wherein *a first end support is coupled to the first anchor*, and *a second end support is coupled to a second anchor*,” as recited in claim 1. (emphasis added).

Second, the deficiencies of Dearman are also not remedied by Snyder. Instead, Synder teaches links that have balls 16 and jaws 21 that may be locked by bolts 22 and nuts 23. (2:15-31).

Accordingly, applicants respectfully assert that the cited references (Dearman, Haumann, and Snyder), whether individually or in combination, do not disclose, teach or fairly suggest every aspect of claim 1. Furthermore, since claims 2, 4, and 12 depend from claim 1, they are at least allowable for the same reason that makes claim 1 allowable over the cited references.

Claims 21, 25-26, and 29-31

Claims 21, 25-26, and 29-31 are rejected under 35 U.S.C. §103(a) as being unpatentable over Dearman in view of Haumann, and further in view of Snyder.

Claims 25-26 and 29-31 depend from claim 21. Claim 21, as amended, recites:

21. A clamping system for securing a first surface of a work piece against a frame during manufacturing, the clamping system comprising:

a first anchor and a second anchor;

a plurality of end supports, wherein a first end support is coupled to the first anchor, and a second end support is coupled to the second anchor, each of the end supports being configured to support the clamping system against the work piece;

one or more externally powered force applying units, each powered force applying unit including a body and a plunger movably attached to the body arranged to apply a clamping force to a work piece; and

one or more elbow units, each elbow unit including a lockable pivot, attached to and interspersed with the one or more force applying units forming a chain of force applying units and elbows between the plurality of end supports, the lockable pivot arranged to pivot to conform the chain to a surface of the work piece when unlocked, and arranged to lock when the force applying unit applies the clamping force to the work piece.

Applicants respectfully traverse these rejections. Specifically, applicants respectfully incorporate the argument present above in response to the rejection of claim 1 under 35 U.S.C. §103(a) by analogy. Accordingly, applicants assert that the cited references (Dearman, Haumann and Snyder), whether individually or in combination, do not disclose, teach, for fairly suggest, “a plurality of end supports, wherein a *first end support* is coupled to the *first anchor*, and a *second end support* is coupled to the *second anchor*,” as recited in claim 21. (emphasis added).

Furthermore, since claims 25-26 and 29-31 depend from claim 21, they are at least allowable for the same reason that makes claim 21 allowable over the cited references.

Claim 42

Claim 42 is rejected under 35 U.S.C. §103(a) as being unpatentable over Dearman in view of Haumann, and further in view of Snyder. Claim 42 depends from claim 40. Claim 40, as amended, recites:

40. A clamping system for manufacturing, the clamping system comprising:
- a first anchor and a second anchor;
 - a plurality of force applying units, each force applying unit including a body and a force applying member movably attached to the body arranged to apply a clamping force to a work piece, wherein the force applying members are configured to be laterally simultaneously motivated by an externally-powered force unit that drives the force applying member relative to the body;
 - a plurality of coupling units operatively coupled to the force applying units, each coupling unit including a movable pivot, attached to and interspersed with the one or more force applying units forming a chain of force applying units and coupling units;
 - a first end support coupled to a first end coupling unit and the first anchor; and
 - a second end support coupled to a second end coupling unit and the second anchor.

Applicants respectfully traverse this rejection. Specifically, applicants respectfully incorporate the argument present above in response to the rejection of claim 1 under 35 U.S.C. §103(a) by analogy. Accordingly, applicants assert that the cited references (Dearman, Haumann and Snyder), whether individually or in

combination, do not disclose, teach, for fairly suggest, “a *first end support* coupled to a first end coupling unit and *the first anchor*; and a *second end support* coupled to a second end coupling unit and *the second anchor*,” as recited in claim 40. (emphasis added).

Furthermore, since claim 42 depend from claim 40, it is at least allowable for the same reason that makes claim 40 allowable over the cited references.

Claim 54

Claim 54 is rejected under 35 U.S.C. §103(a) as being unpatentable over Dearman in view of Haumann, and further in view of Snyder. Claim 54 depends from claim 52. Claim 52, as amended, recites:

52. A clamping system for clamping a work piece during manufacturing, the system comprising:
- a first anchor means and a second anchor means;
 - a plurality of force applying means, each force applying means arranged to apply a clamping force to the work piece, wherein the force applying means are configured to be laterally simultaneously motivated by an externally-powered;
 - a plurality of pivoting means arranged in a chain with the plurality of force applying means, the pivoting means arranged to pivot to conform the chain to a surface of the work piece; and
 - a first end support means coupled to a first pivotal means and the first anchor means; and
 - a second end support means coupled to a second pivotal means and the second anchor means.

Applicants respectfully traverse this rejection. Specifically, applicants respectfully incorporate the argument present above in response to the rejection of claim 1 under 35 U.S.C. §103(a) by analogy. Accordingly, applicants assert that the cited references (Dearman, Haumann and Synder), whether individually or in

combination, do not disclose, teach, or fairly suggest, “a *first end support means* coupled to a first pivotal means and the *first anchor means*; and a *second end support means* coupled to a second pivotal means and the *second anchor means*,” as recited in claim 52. (emphasis added).

Furthermore, since claim 54 depends from claim 52, it is at least allowable for the same reason that makes claim 52 allowable over the cited references.

Claims 7-8, 11, and 14-15

Claims 7-8, 11, and 14-15 are rejected under 35 U.S.C. §103(a) as being unpatentable over Dearman in view of Haumann, and further in view of Snyder and Smith. Claims 7-8, 11, and 14-15 depend from claim 1. Claim 1, as amended, recites:

1. A clamping system for securing a first surface of a work piece against a frame, the clamping system comprising:
 - a first anchor and a second anchor;
 - a plurality of end supports, wherein a first end support is coupled to the first anchor, and a second end support is coupled to a second anchor;
 - one or more force applying units, each of the force applying units including a body and a plunger movably coupled to the body and adapted to apply a clamping force to a second surface of the work piece to secure the first surface of the work piece against the frame; and
 - one or more coupling units linked with the one or more force applying units forming a chain of interspersing force applying units and coupling units between the plurality of end supports to support the force applying units against a second surface of the work piece opposite the first surface, each coupling unit including a lockable pivot, the lockable pivot adapted to pivot to conform the chain to a surface of the work piece when unlocked, and adapted to be locked when at least one

of the force applying units applies the clamping force to the work piece.

Applicants respectfully traverse these rejections. First, applicants respectfully incorporate the argument present above in response to the rejection of claim 1 under 35 U.S.C. §103(a). Accordingly, applicants assert that the cited references (Dearman, Haumann and Synder) do not disclose, teach, for fairly suggest, ““a plurality of end supports, wherein *a first end support is coupled to the first anchor*, and *a second end support is coupled to a second anchor*,” as recited in claim 1. (emphasis added).

Second, the deficiencies of Dearman are also not remedied by Smith. Instead, as noted by the Examiner, Smith teaches that a lockable pivot may be actuated externally by pneumatic means using a solenoid. (8:15-16).

Accordingly, applicants respectfully assert that the cited references (Dearman, Haumann, Synder, and Smith), whether individually or in combination, do not disclose, teach or fairly suggest every aspect of claim 1. Furthermore, since claims 7-8, 11, and 14-15 depend from claim 1, they are at least allowable for the same reason that makes claim 1 allowable over the cited references.

Claim 55

Claim 55 is rejected under 35 U.S.C. §103(a) as being unpatentable over Dearman in view of Haumann, and further in view of Snyder and Smith. Claim 55 depends from claim 52. Claim 52, as amended, recites:

52. A clamping system for clamping a work piece during manufacturing, the system comprising:
a first anchor means and a second anchor means;
a plurality of force applying means, each force applying means arranged to apply a clamping force to the work piece, wherein the force applying means are

- configured to be laterally simultaneously motivated by an externally-powered;
- a plurality of pivoting means arranged in a chain with the plurality of force applying means, the pivoting means arranged to pivot to conform the chain to a surface of the work piece; and
- a first end support means coupled to a first pivotal means and the first anchor means; and
- a second end support means coupled to a second pivotal means and the second anchor means.

Applicants respectfully traverse this rejection. Specifically, applicants respectfully incorporate the argument present above in response to the rejection of claims 7-8, 11, and 14-15 under 35 U.S.C. §103(a) by analogy. Accordingly, applicants assert that the cited references (Dearman, Haumann, Synder, and Smith), whether individually or in combination, do not disclose, teach, for fairly suggest, “a *first end support means* coupled to a first pivotal means and the *first anchor means*; and a *second end support means* coupled to a second pivotal means and the *second anchor means*,” as recited in claim 52. (emphasis added).

Furthermore, since claim 55 depends from claim 52, it is at least allowable for the same reason that makes claim 52 allowable over the cited references.

CONCLUSION

Applicants respectfully request that the above-proposed amendments be entered and that pending claims 1-2, 4, 7-8, 11-12, 14-15, 21, 25-26, 29-31, 40-42, 45, and 52-55 be allowed. If there are any remaining matters that may be handled by telephone conference, the Examiner is kindly invited to contact the undersigned attorney at the telephone number listed below.

Respectfully Submitted,

Dated: 3/5/07

By: 

Elliott Y. Chen
Lee & Hayes, PLLC
Reg. No. 58,293
(206) 315-7914